

### **REMARKS/ARGUMENTS**

Claims 11-22 stand in the present application, all of the claims having been amended. Applicants note with appreciation the Examiner's helpfulness and kindness provided to the undersigned at the interview on June 22, 2004. Reconsideration and favorable action in this case is respectfully requested in view of the above amendments and the following remarks.

In the Office Action, the Examiner has objected to the claims for a number of technical deficiencies. As noted above, Applicants have amended the claims in order to correct the errors in form pointed out by the Examiner. For example, claims 11 and 13 have been corrected to correctly refer to "the fuel trim valve" instead of "fuel trim valves."

In addition, Applicants have corrected the terminology concerning the sensor which senses (or detects) a variation in fuel/air ratio. Thus, in claims 11-18, Applicants have amended the claims to refer to a "variation sensor for detecting variation in fuel/air ratio." With respect to claims 19-22, Applicants have amended the claims to refer to a "means for detecting variation in fuel/air ratio."

Finally, with respect to claims 15, 17, 19 and 21, Applicants have corrected the error pointed out by the Examiner to eliminate the ambiguity in the preamble of these claims. In view of the above-described claim amendments, the Examiner's technical deficiencies and § 112 deficiencies are believed to have been overcome.

In the Office Action the Examiner has also rejected claims 11-22 under 35 U.S.C. § 102(b) as being anticipated by Beebe et al. '931. Applicants respectfully traverse the Examiner's § 102 rejection of the claims.

Applicants' invention is directed to a new and novel control system for a gas turbine. More particularly, the control system controls the gas turbine to optimize performance by implementing the algorithm set forth in the present application at pages 12-15. As stated at page 14 of the present application, the control algorithm implemented in Applicants' invention involves first optimizing or enhancing more than one parameter involved in the gas turbine's operation, i.e., dynamic gas pressure and variation in fuel/air ratio, and then subsequently further controlling the gas turbine to either maintain the variation in fuel/air ratio at a predetermined level (for example, claim 11) or to maintain NO<sub>x</sub> emissions at a predetermined level (for example, claim 13). In order to emphasize that the controller of Applicants' invention recited in each of the claims operates as described above, Applicants have amended each of the independent claims to more clearly recite this dual stage operation and to clearly recite that the computer controller is programmed for this particular sequence of operations. Since the cited reference does not teach or suggest the operation of a gas turbine in accordance with the aforementioned algorithm (or two stage operation), all of claims 11-22 are believed to patentably define over the cited reference.


More particularly, as can be seen most readily by referring to claim 1 of the cited reference, Beebe et al. '931 merely senses various parameters of the turbine operation and then uses the sensed data for adjusting the fuel control trim valve for each chamber

so that a selected fuel/air ratio is maintained in each chamber. This differs significantly from Applicants' invention in which the computer controller optimizes the dynamic gas pressure and the detected fuel/air ratio variation, and then subsequently further adjusts the fuel trim valve for each one of the chambers to maintain the variation in fuel/air ratio at a predetermined level or the NO<sub>x</sub> emissions at a predetermined level.

Therefore, in view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all of claims 11-22, standing in the application, be allowed and that the case be passed to issue. If there are any other issues remaining which the Examiner believes could be resolved through either a supplemental response or an Examiner's amendment, the Examiner is respectfully requested to contact the undersigned at the local telephone exchange indicated below.

Respectfully submitted,

**NIXON & VANDERHYTE P.C.**

By:  (#41,426)  
for Chris Comuntzis  
Reg. No. 31,097

CC:Imr  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100